UNIVERSITIES' ROLE IN KNOWLEDGE-BASED ECONOMY AND SOCIETY. IMPLICATIONS FOR ROMANIAN ECONOMICS HIGHER EDUCATION

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Abstract

The main objective of the article is to analyse the extent to which Romanian universities and, particularly, those in economics higher education field can face the demands of knowledge-based economy and society. The specific objectives of the work mainly consisted of: (a) reviewing the literature outlining the theoretical, methodological and conceptual boundaries; (b) identifying methods for assessing universities' intellectual capital and examples of good practice; and (c) presenting our research results. The research methodology was based on a structured questionnaire applied in the *Academy of Economic Studies*, Bucharest, *Faculty of Business Administration in foreign languages*. Examples of good practice in European universities and international reports of prestigious international organizations were considered as well. The research highlighted the key role of universities as main investors in lifelong learning education, by including the opinions of the direct beneficiars-students, within the context of the Romanian society and knowledge-based economy.

Keywords: Knowledge-based economy, knowledge-based society, investment in lifelong learning education, intellectual capital, sustainable competitive advantage

JEL Classification: A10, D83, E22, I20, J24

Introduction

In the era of knowledge-based economy and society (KBES), human capital (HC), intellectual capital (IC), creativity, innovation, and education play an increasing role in the portfolio of assets owned by an organization. The real source of sustainable competitive advantage for universities resides in people, by concentrating efforts on their knowledge and skills (Suciu, 2002).

The change in the nature of knowledge imposes new requirements on academic systems in relation to KBES, which must provide trained individuals able to operate with new

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cognitive tools, and it focuses on the harmonious integration of traditional learning processes in institutions along formal-informal-nonformal axis (according to education prerogatives for lifelong learning - LLL). It is necessary to identify and analyse key competences specific to KBES. Investing in human capital and particularly lifelong learning investment in education is an investment of strategic priority both at microeconomic level (for every person or organization), macroeconomic and meso-economic level (region, field of activity, local community) (Suciu, 2001). Universities are actively involved in development and dissemination of knowledge and competences, essential for KBES processes.

The team focused on capturing the perception of students enrolled in one of the most prestigious Romanian economic and business higher education institution, *Academy of Economic Studies Bucharest*, on the role of universities in KBES.

1. Knowledge-based economy and society. Conceptual and methodological framework

Under the auspices of a knowledge-based economy and society (KBES), knowledge, creativity, innovation, intangible assets and intellectual capital represent key factors for a long-run sustainable development (Suciu, 2004, 2002). Previous published works (Suciu, 2001) highlighted that investing in education provides several opportunities for strengthening and developing competences along formal-informal-nonformal axis with a special relevance to KBES.

The international organisations, such as the OECD (Blöndal, 2002) or the World Bank, are interested in competently managing these assets, and particularly in education and innovation policies. Therefore *the World Bank* initiated the programs *Education for Knowledge Based Economy (EKE)* and the *Knowledge for Development Program*. The World Bank's experts have developed *the Knowledge Assessment Methodology (KAM*) through which *the Index for Knowledge Economy (KEI*) has been used. KEI is an aggregate indicator referring to a country's overall preparedness towards the *knowledge based economy and society*.

According to KAM methodology, the main components of the knowledge - based economy are: economic and institutional regime; education; information and communication technology; efficient national innovation systems.

In 2009, Denmark ranked as the most advanced knowledge-based economy with a KEI of 9.52 out of 10. Sweden and Finland have occupied the next two positions in the ranking. Romania ranked 47 (with a score of 6.43) out of 145 countries in 2009 and it showed a performance improvement of KEI compared to 1995 for all four analyzed dimensions (table no. 1).

Table no.1: Knowledge Economy index, in Romania, 1995 and 2009

Country	KEI		Economic and institutional regime		Innovation		Education		Information Technology and Communication ICT	
	2009	1995	2009	1995	2009	1995	2009	1995	2009	1995
Romania	6.43	5.48	6.98	5.73	5.74	4.75	6.47	6.20	6.55	n/a

Source: adapted from the World Bank, 2010

Based on the data provided in table no. 1, it can be noticed that education is one of the components significantly contributing to the aggregate index value of KEI (in 2009 for Romania it was 6.43 and the related education component score was 6.47). The World Bank's KAM methodology confirms that education, and especially higher education (universitary studies, master, doctoral and postdoctoral programs, etc.) are becoming prioritary, strategic investments contributing to improving the performance of a country, in relation to various benchmarking methods. LLL is a real source of sustainable competitive advantage in the long term. As pointed out in previous works (Suciu, 2004, 2002) in the context of KBES, the importance of investment in education correlates with more complex issues regarding the increasingly role of: intangible assets and intangible assets management; intellectual capital and intellectual capital management; creativity, innovation and creative-innovative management; knowledge and knowledge management.

As reflected by the new approaches to a sustainable economic growth and development, mostly those of Paul Romer and Robert Lucas, a veritable source of sustainable competitive advantage is likely to be an endogenous one. The new approach of KBES shades the approaches of the traditional economy by emphasizing that the law of diminishing marginal returns, network type externalities, positive feedback (Brian, 1994) make the value of intangible assets, intellectual capital, and knowledge to appreciate and not to depreciate to their extent of use. Therefore, for the most competitive organizations, around 80-90% of the added-value is provided by intellectual capital and intangible assets. Thomas Stewart (1997) revealed in a reference work "*Intellectual Capital: The New Wealth of Organizations*" that today's intellectual capital is a veritable source of wealth and prosperity for the organization. Knowledge-based organizations (KBO) attach a great importance to the investment in human capital and mostly to investment in education.

KBO are aware of the great importance that people have, through their knowledge and skills (*human capital*), to developing a competitive and sustainable organization. Also, the specific internal processes of an organization (*structural capital*), and its reputation (*relational capital*) are of importance. Together, the human, structural and relational capitals are considered the most important components of intellectual capital.

These represent the ground for assessing organizational performance based on the *Intellectual Capital Reports (ICR)* as highlighted in the case of the *Skandia,* a multinational company that developed its first ICR in this sense in 1997.Within the KBES context, universities are some of the most important knowledge-based organizations. That is why experts have suggested, as pointed out in previous papers (Suciu, 2008, 2004) that universities need to improve their performance assessment methodologies.

Instead of traditional methods used for ranking and based mostly on quantitative criteria, as the "*Shanghai top*" type, it is necessary to rely on structural–qualitative oriented methods, such as ICR. In previous papers (Suciu, 2008) we presented a broader range of examples of intellectual capital reporting in universities based on samples of socio-cultural spaces relatively consistent with that of Romania (Poland, Spain). We included a brief presentation of ICR applied in Austria, country where universities are obliged by law to carry out an assessment, report and monitor of their achieved performance, in relation to IC.

2. Intellectual capital evaluation and monitoring at universities level

It has been highlighted before (Suciu, 2008) the importance of different methods of measurement and benchmarking specific to KBES. Therefore, we present only some

aspects of evaluation and monitoring of intellectual capital in Austrian universities. In 2002 the Austrian government decided that intellectual capital reports would be mandatory for all universities (Figure no. 1).

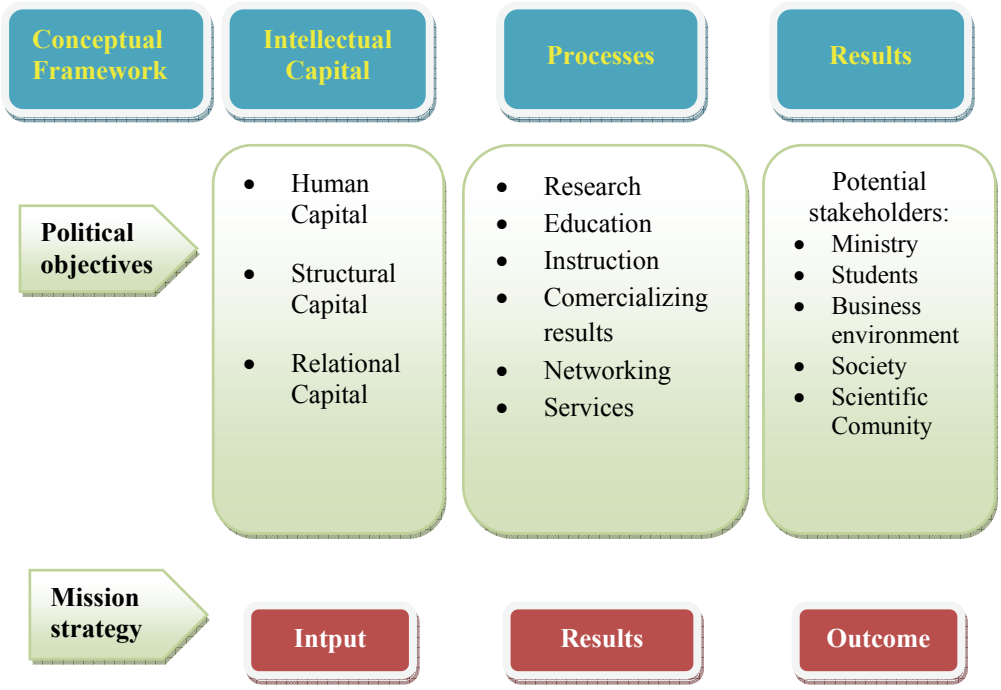

Figure no. 1: Model for reporting intellectual capital in Austrian universities

Source: adapted from Leitner, 2004, p. 7

The main reasons why universities should evaluate intellectual capital are: increased transparency; intellectual capital reports which would allow comparing different rating systems from other universities; strengthening the links between universities and the business environment by using a common language. This "*common ground*" could allow theoreticians and practitioners to develop mutually beneficial relationships.

Through the *University Act 2002 (Section 13, subsection 6*) it has been established that "*Each university must submit a report on intellectual capital"* (Federal Ministry of Education, Science and Culture, 2002). The reporting system in Austrian universities aims to improve transparency, internal and external communication as well as to provide guidance to management for making decisions and accurate information forecasts. The report structure includes two parts: a narrative part and one dedicated to statistics, analyzing the key performance indicators from a process perspective, for a holistic vision on the organization.

3. Strategic priorities for university education in the context of KBES

3.1 European higher education context according to KBES requirements

Education and training are crucial ingredients for efficient economic and social changes induced in Europe by KBES. Ján Figel, European Commissioner for Education, Training, Culture and Youth said that "*…a high quality education is vital if Europe wants to develop as a knowledge society and compete effectively on the global economy. The member states must intensify their efforts of responding to the challenges of the XXI century. The message to policy makers in Member States is clear: we need effective investment in human capital*" (European Commission, 2007).

"*Europe 2020*" strategy highlights a series of challenges the EU is facing related to, on the one hand, the effects of financial crisis, and on the other hand to long-term trends (such as globalization, pressure on resources and an aging population). The demographic crisis faced by the most European countries due to aging population and a declining birth rate, plus the global economic and values system crisis, put additional pressure for higher education institutions (Ghourchian and Rezaei, 2008). "*The agenda for new skills and jobs"* is designed to help modernizing the labor market and developing skills by increasing labor market participation and supporting reconciliation of labour supply and demand, including through mobility programs . At the European Union (EU) level, starting with the objectives of "*Education and Training 2010*" as part of the Lisbon Strategy, and reiterated by the "Europe 2020 agenda–*A European Strategy for smart, sustainable and Inclusive Growth"* (Barroso, 2010), one of the main pillars is represented by LLL programs and strategies. Also, "*Education and Training 2020*" program makes direct reference to improving the quality of educational institutions. It proposes a holistic approach to ensure favorable conditions KBES by preparing highly educated young people in relation to the new demands of the labor market. The holistic approach is acknowledging also the importance of the triangle *of knowledge-education, research and innovation*, for assuring a sustainable and competitive socio-economic development in the long-run (Hervàs and Mulatero, 2009).

The role of economic higher education institutions in educating the young generation has never been more significant than within the KBES framework.

Their responsibility as main investors in LLL education is essential, also confirmed by EU experts which attest that "*more and better investment in modernizing and quality ensuring of universities is a direct investment in the future of Europe and Europeans"* (European Commission, 2005). Universities operate in a more dynamic environment, characterized by increasing global competition to attract and retain the most talented people. It is considered that the European universities are less flexible and own less financial tools and resources compared with universities in other developed countries, particularly the U.S.A.

Therefore, it would be relevant to increase the performance of European universities and empower them to compete with the best universities in the world. The European academic environment is characterized by heterogeneity and diversity in terms of organization, administration and operating conditions, including the employment and recruitment of teachers and researchers. Universities have to adapt to changes induced by KBES in particular: the increasing demand for qualifications and skills specific to higher education; internationalization of education and research; developing a close and effective cooperation between universities and business community. To modernize the system of higher education it is necessary to consider the evidence related to: curricula and curricular structures (by increasing the importance of pragmatic aspects); resorting to methods that

encourage creativity and innovative learning (including the activation of emotional intelligence) detrimental to mechanical reproduction learning; marketing and educational management; alternative financing sources; the partnership between universities and business. As important as those is performance monitoring and benchmarking with other universities, particularly with the EU ones, by resorting to new benchmarking and monitoring methods specific to KBES.

The EU Council adopted on 12 May 2009 a strategic framework for further European cooperation in education and training - "*Education and Training 2020"-ET 2020*. The main purpose of *'ET 2020'* is to support the improvement of national education and training.

By 2020, the European cooperation aims at supporting development of education and training systems in Member States to: ensure the fulfilment of personal, social and professional development of all citizens. Also it promotes democratic values, social cohesion, active citizenship and intercultural dialogue, all in order to guarantee favorable conditions for sustainable development.

Another instrument is a periodic monitoring of the progress made towards achieving certain goals. This contributes to a better foundation of educational policies. Figure no. 2 shows the progress achieved for the five targets set for the period 2000-2010 in the "*Education and Training 2010*". However the review progress by 2010 is an indicator of possible future trajectories. Both at school and university level, the steps taken forward since 2000 represent the favourable set of conditions for achieving the 2020 targets. There may appear, however, some saturation effects which could lead to a slowdown after 2010. Regarding early school leavers level improvement achieved in 2000-2008, this represents a favourable barometer for an achievable 10% level set for 2020. Advancement on this indicator slowed down in 2007-2008.

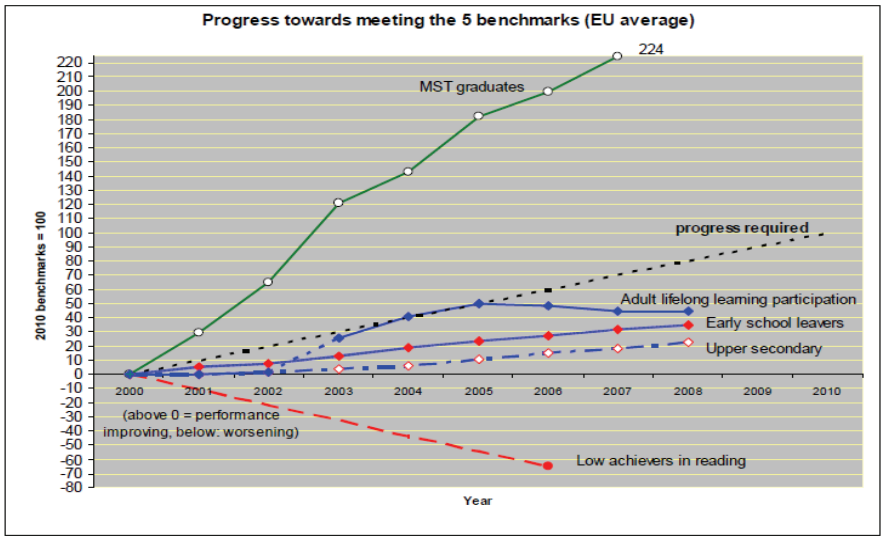

Figure no. 2. Progress towards meeting the five targets of benchmarking in training and education in 2000-2010

Source: European Commission, 2009, p. 23

Figure no. 3 reflects the evolution of the benchmarking targets in education set for 2000-2020.

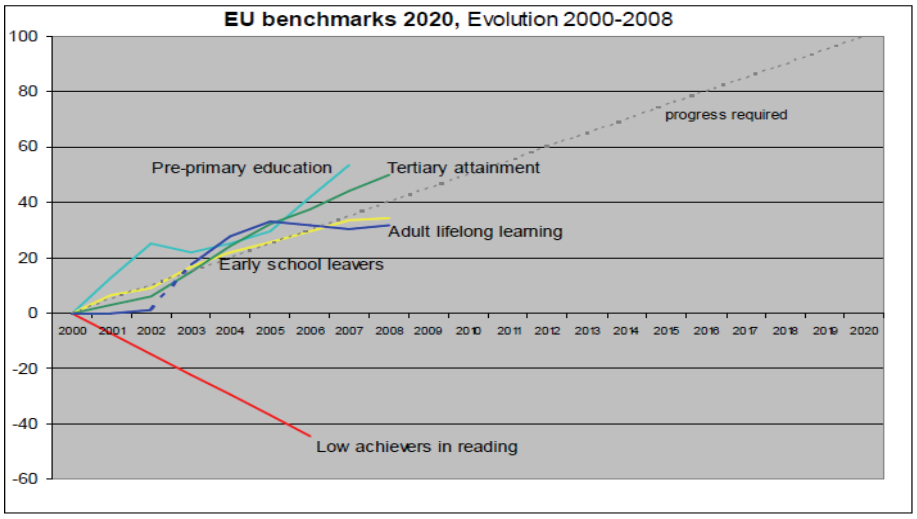

Figure no. 3: Evolution of benchmarking targets set at EU level in 2000-2020

Source: European Commission, 2009, p. 23

For the lifelong learning target, improvements in performance are noticed even if the progress on this indicator was relatively constant since 2005. Based on the results of the monitoring and strategic objectives of "*Europe 2020*", *new strategic prioritary objectives* for education have been outlined in the 2020 horizon for the EU: implementing the LLL principles; improving quality and efficiency of education; promoting equity, social cohesion and active citizenship; creativity and innovation, including entrepreneurship at all levels of education and training.

In our opinion, is useful to identify Romania's position through such benchmarking methods developed at European level. However, we consider that in order to be more coherent in the analysis of the role of universities in Romania within KBES, it is also required an analysis of the national framework. Therefore, the study focuses on this aspect further.

3.2 Romanian higher education system: a KBES perspective

All over the world, the decision makers for fundamenting public policies are putting more and more emphasis on educational policies and it reveals a higher significance of universities as potential investors in LLL. And Romania makes no exception in this sense (Presidential Commission, 2007). In Romania in the last two decades it was incurred an important increase in the number of students. According to Eurostat, the total number of students enrolled in the Romanian higher education has almost tripled, increasing from 360,590 in 1998 to 738,806 in 2005 and exceeding one million in 2010. This trend is even more impressive considering that it

occurred on the background of a demographic crisis, which lead to a decline in population for the age group 20-24 years (Figure no. 4).

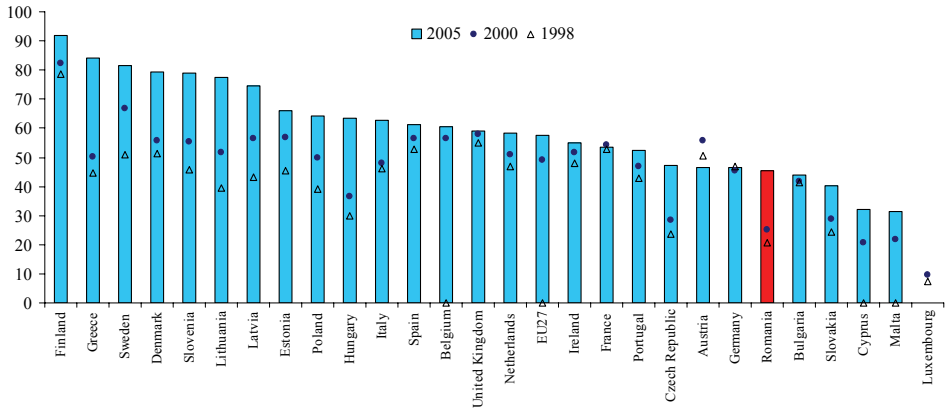

Figure no. 4. Evolution of percentage of higher education students out of total population aged 20-24 in EU 27

Source: Authors' calculations using data from EUROSTAT, 1998, 2000, 2005

According to Eurostat the percentage of adults participating in lifelong learning is very low in Romania, (1.3%) compared to other European countries (30% in Denmark, Sweden).

As such, lifelong learning education is a challenge which requires the attention of policy makers, business community and universities as a source of knowledge, at micro, meso and macroeconomic level.

Also, due to the conditions of deepening demographic and economic crisis in Romania, the number of students is expected to drop (Presidential Commission, 2009). Diminishing financial resources available to families from many parts of Romania would only favor the access of students coming from a wealthy family, able to afford covering the relevant costs for schooling. This would require a revision of financial incentives offered to students. Another issue is related to the scholarship criteria which are almost exclusively based on academic performance and less on a student's financial needs assessment.

In Romania, investing in education is a key element for sustainable development. It requires a paradigm shift with a relocation of focus from teaching to learning, which means that education would have more of *a formative role* rather than an informative one. Teachers transform their role becoming primarily trainers and facilitators of the learning process which is designed to provide support to personal and professional development.

The quality of human resources in Romania depends largely on available financial resources, working conditions and career prospects. In this sense there are three elements that we consider important for Romanian universities:

- ensuring access to alternative financing resources. The main source of funding for university research and teaching is currently represented by public funding;
- improving the quality in relation to European and international standards, especially in research and teaching areas;

- opening of Romanian universities to the outside world and increasing their attractiveness at international level.

The development of EKBS in the recent years requires the support from a growing educational system, adapted to the current needs and the incorporation of the *'virtual'* component in education (Bodea and Andone, 2007, p. 46). *The virtual university* or *e-university* is a new concept which tries to eliminate the time and space barriers by making use of modern information and communication technologies. The learning materials are presented in multimedia format and they provide numerous advantages: access right to the source; more flexibility for students in selecting the required learning support; improving communication with professors and other students. However there are also difficulties like high costs incurred with technology; troubles in supporting from students, professors and administrative staff. Additionally, it requires experience of beneficiaries in the IT domain as well as developing an optimal strategy for e-learning. *E-learning* allows for a new approach of learning and optimizing it by distance distribution of information and knowledge, getting advantage from authorized educational support (Bodea and Andone, 2007, p. 55).

In order to overcome the gap that currently separates the European and the Romanian education systems (Sarbu, Ilie, Enache and Dumitriu, 2009), and to successfully carry on the reform process, Romanian universities apply knowledge management principles and choose evaluation performance against qualitative indicators of intellectual capital reports.

These are the ingredients for an education system that ensures competitiveness and efficiency in terms of KBES. Consequently, it is undeniable that in Romania universities have a key role in the KBES. Universities approach as knowledge-based organizations implies also ensuring a constructive dialogue with business sector through a genuine partnership located at the confluence of research, education and innovation.

4. The role of economics higher education in Romania in the context of KBES

Economics and business higher education have a key role in KBES and in Romania (Năstase and Kajanus, 2008). In section 5.1 we present the opinion of firms' representatives on economics universities and on business-universities partnerships. In section 5.2 are presented the results of our research focused on identifying students' opinion from the *Faculty of Business Administration with teaching in foreign languages (FABIZ)* of the Academy of Economic Studies Bucharest.

4.1 The opinion of firms' representatives on the partnership with economic universities

In the first half of April 2009, a study called "*Corporate attitude toward a business-education partnership"* was conducted in Bucharest. The objective was to identify the perspective of companies' representatives on economic universities, their curricula and degree of openness to a potential partnership. Organizations that have completed the questionnaire came from a broad range of activities, while the rate of employment was over 80% in all the companies investigated. This aspect highlights the fact that responding companies are important "*consumers" of "products*" of higher education, namely graduates.

Despite the general opinion that usually there is no significant correlation between theory and practice, the percentage of responses in favour of correlation, meaning that programs reflect the practices of universities and private sector standards warrant, was high (42%). All respondents felt that practical training should take place under the support of a business-education partnership which should include also business ethics issues (Popescu, 2008). More than half (58%) of surveyed companies had programs that were specifically addressed to students, while 42% of respondents did not.

4.2 Analysing students' perception on the role of universities in the KBES. Case study based on the example of the Faculty of Business Administration with teaching in foreign languages (FABIZ) of the Academy of Economic Studies Bucharest

The main goal pursued by our research team focused on identifying students' perceptions on the role of universities in supporting the development of knowledge economy in Romania and to underline the extent to which students consider that the Romanian economic university system is ready to face KBES demands.

4.2.1 Data collection and questionnaire's structure

For this case study, a structured questionnaire was used. The questionnaire's items targeted both two-choice questions and statements measured on *the 7-point Likert scale*. It was divided into five sections that focused on the essential characteristics of interest groups. It included an introductory part in which some of the concepts were defined, particularly those that could raise problems in understanding from the respondents' side due to the novelty of the topic.

The questionnaire was distributed throughout November 2010 - January 2011, and it included a number of 200 respondents who have volunteered, representing students from the *Academy of Economic Studies, Faculty of Business Administration teaching in foreign languages (FABIZ*). Out of the 200 questionnaires distributed, 175 questionnaires were fully completed, and therefore, their validation rate was high. In terms of socio-demographic characteristics, we would like to emphasize that respondents were randomly selected, representing a diverse sample, aged 19-36 and a favourable gender distribution toward females (78% of respondents), compared to only 12% males. The sample included both first year students and others in their *Master's degree taught in English* in the "*Business Administration*" Master programme within the same faculty, FABIZ. The share of foreign students who completed the questionnaire was 10%.

4.2.2 Structure of the questionnaire with reference to the main group of questions asked

Out of the issues considered in our 37 questions asked in the questionnaire, we will present only some of the most significant ones, particularly those related to: assessing the effectiveness of the learning process; structural and organizational changes needed in higher education in the economic programs of studies offered to ensure a close correlation with the demands of knowledge-based economy and society.

- *Assessing the effectiveness of learning*

The difficulty of assessing the economic higher education institutions is increasingly important, gradually overcoming the confusion stage with the simple "*testing*" on the knowledge accumulated. From the perspective of LLL and aligning personal and professional development, it has become obvious that it is insufficient to assess the performance requirements related to promoting.

Passing an exam or only accumulating a number of credit points to justify obtaining a certificate of graduation is not enough. It becomes imperative for the individual to demonstrate that he or she truly learned and holds a "*skills portfolio*" that not only increases chances for getting a job, but also for managing and developing their careers. Furthermore, it aims to evaluate not only students but also professors, and it considers the whole process which gives universities the virtues of knowledge-based organizations. Therefore, the assessment is done not only at individual level, but also at the level of the education system. Another aspect to be considered is represented by the specific forms of online distance learning.

- *Structural and organizational changes needed in the economics higher education institutions within the programs of study such as to provide a closer correlation with the requirements of the KBES*

University education in general, and the economic one in particular, face now an increased number of graduates. Although universities are considered to be some entities specific to the "*business"* sector, this statement is not longer valid. The *entrepreneurial university model*, promoted especially in the U.S.A. and the integration of the corporate model into the structure of educational organizations, led to a convergence towards a common area defined by these two types of organizations. KBES exigencies require an integrated treatment of knowledge-based organizations, no matter if they belong to academia or business environment. In some cases, a list of public/private financed courses is offered in order to meet the specific economic sector needs (Graham, 2002). This requires finding answers to questions about the cost, efficiency and effectiveness in relation to the skills which are developed. In some cases, the courses might be too expensive compared to the value added they may generate later.

Situations need to be analyzed in detail and case by case as the efficiency of educational investment and rate of return follow a medium and long term approach (Suciu, 2001). Structuring the programs should reflect the requirements of the knowledge-based economy and society. To a large extent it is considered that this has been initiated in Romania by integrating in the curriculum the reflexive questioning and valuable dimension, which takes into account developing specific skills for critical thinking and a practical dimension, following the formation of attitudes and practicing rational behaviors.

Expanding range of options in terms of economic training, may lead to the diversification of skills and abilities of individuals, helping them to be able to obtain a competitive advantage on the labor market.

4.2.3 Data analysis and the obtained results

An important element of the questionnaire was to investigate the expectations of the beneficiaries of higher education in economics and business education regarding the implications of promoting knowledge-based economy and society. As international

experience shows, the functionality and efficiency of universities is an essential part of building an environment to cope with the demands of the KBES. The questionnaire aims to identify the factors that may determine the success for a KBES.

The results showed that the students surveyed are generally satisfied with their university (70%), the remaining being undecided or showing a degree of dissatisfaction. Some areas have enjoyed a greater appreciation among students, such as: employees' competence (professors, administrative staff), for which it was obtained a weighted score of 4.68; universities attempt to provide better services as compared with other similar educational institutions (5.3). The existence of appropriate information infrastructure creates favourable conditions for developing individual skills, which can help the student not only to accumulate knowledge, but also disseminate it and develop certain specific competences for KBES. The importance of developing online education programs in universities in Romania is seen as an urgent requirement for ESBC (Figure no. 5).

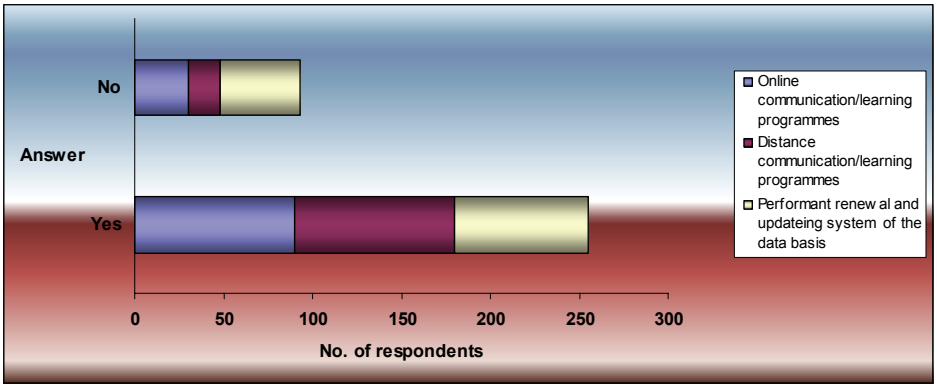

Figure no. 5: The possibility of accessing online learning programs

The qualitative component is emphasised through the actual use of information infrastructure and access to the databases of the university. Students gave a 5.1 score to these facilities, 63% of respondents being convinced that a better system than the current one could be built. 57% of respondents noticed the existence of videoconferencing and teleconferencing equipment required in universities, but only 34% participated at least once in activities which involved using these facilities. In the same time, the online learning is gaining ground and students are encouraged to use the available software (score 5.6).

The second part of the questionnaire sought to examine the extent to which specific principles of knowledge-based economy and society are reflected in the economic institutions of higher education. The main findings are presented below:

- *Basic concepts of knowledge-based economy are treated at many courses, especially in the economic faculties*. However, there is a need for greater promotion of modern methods of learning conducive to innovation and stimulating creative thinking.

- *Respondents considered that Romania will have to prepare university annual reports on intellectual capital* (average score is 6). Most students (with a rating of 6.4 out of 7) highlighted that these should be transparent and publicly available with a view to a real feedback. From the institutional perspective, students felt that research and development departments in universities

could be designated to make such reports. 86% of students acknowledged the existence of these bodies of research within universities.

• *Higher education institutions manage to create an atmosphere that encourages students' activities* (average rating 5), but with the caution that it is necessary to promote new and innovative ideas.

Students considered appropriate making use of the expertise that can be achieved by strengthening links between universities in consortia and/or through partnerships with the business environment.

Figure no. 6 presents the students' perception about the degree of compliance with the specific requirements of KBES of higher education institutions (in the graph, these requirements have been encoded with capital letters from A to F):

A. Encouraging the development of intra-and interpersonal relations within and between different groups of students;

B. Prepare students to become acquainted with a number of practical aspects specific to the labor market;

C. The existence of a significant number of optional courses in which students can enrol for specialization;

D. The existence of sufficient practical work in courses and seminars where students practice a wide range of skills;

E. Encouraging participation in scientific events specific to their interests;

F. Organizing events that facilitate the access of young people to the labor market.

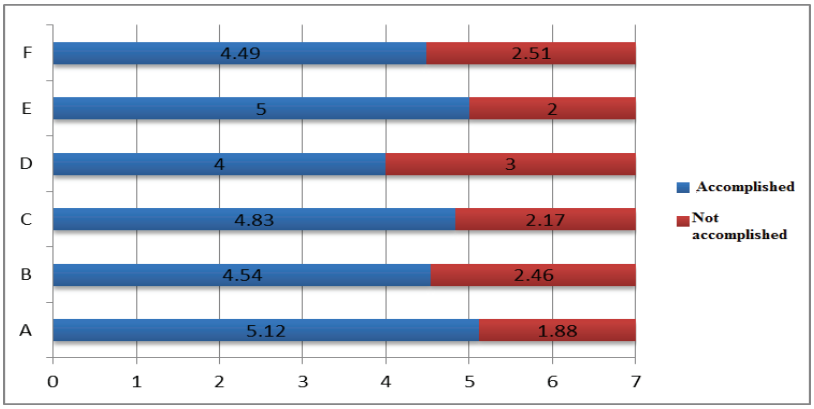

Figure no 6: Correlating the universities' educational offer with the labour market demand in the context of KBES

Students expressed the need for practical work during courses and seminars, and training in universities while matching students to labour market requirements. Only a proportion of 57% of subjects surveyed believe that most teachers are involved both in the training

process and in the development of individual students and 67% of them have at least one teacher as their mentor. The survey recorded an average rating of 3.8 in terms of frequency of regular teachers-students meetings. Students considered that holding informal meetings would emphasize the pedagogical aspects of education.

The last part of the questionnaire sought to identify the extent to which universities in Romania are able to engage effectively in KBES, mainly taking into account to:

- *The organization of activities and projects that will include information campaigns on the rights of students*. Respect for the principles of diversity, equal opportunities and social inclusion require the integration of all students, regardless of ethnicity, gender. 96% of respondents believe that there is no preferential treatment for certain groups of students regarding access to facilities on campus. Progress has been made also in terms of diversifying access to higher education, 77% of students found useful and transparent the use of online learning programs, 84% for distance learning and 100% for international exchange and mobility programs. Students propose and encourage informal meetings to enhance communication skills and cross team spirit. The negative effects of bureaucracy in universities are still being felt (5.1 rating).

- *Grant awards and distinctions* have been noted by students who consider that recognition of merit is important.

Conclusions and recommendations

Within the context of a KBES, sustainable development needs to emphasise the endogenous sources like: knowledge, innovation, human capital, intangible assets, etc. The results of our research have confirmed for Romania as well the key role of universities and higher education institutions in economics and business as main investors in LLL. The results of the study confirmed that basic concepts of knowledge-based economy are treated at many courses, especially in the economic faculties. However, there is a need for greater promotion of modern methods and tools of learning leading to innovation and stimulating creative thinking.

Firstly, the need for a change in the overall assessment process (individually and systemic) is now orienting towards the verification of a skills portfolio, and not just the credit accumulation and for ensuring a balance between professional and personal development. Secondly, the research focused on determining the degree of correlation between the offer from higher education institutions and KBES requirements, including those of the labor market.

This is why after evaluating the satisfaction level among beneficiaries, which was quite impressive- of 70%, the questionnaire focused on the extent to which the specific concepts and notions belonging to KBES are acknowledged by students. The findings indicated that though included in the curricula, additional efforts are required from universities, fact acknowledged by other studies as well (Brătianu and Nistoreanu, 2008): intellectual capital annual reports, as well as concentrating more on practical classes and labor market skills necessities. This last aspect is insufficiently developed, as most of students consider that this objective has not still been completely reached according to our findings. Nevertheless, taking into account the involvement of the university in activities closely related to KBES, this goal is important.

Activities and projects that include information campaigns on the rights of students and the presence of distinctions are factors with a strong impact over the compliance of Romania to KBES conditions. For these two last sections of the research the results showed encouraging figures, of 70% to almost 100%. The respondents consider the economic universities capable and offering useful information and in a transparent manner, as well as awards for special merits.

Also students highlighted the need for transparency through preparing and making the annual reports on intellectual capital publicly available. Nevertheless, it seems that higher education institutions manage to create an atmosphere that encourages students' activities, but with the caveat that it is necessary to promote new and innovative ideas. This could be one area of interest for research in the future.

Overall, this area of research remains a very intriguing one and we express our intention of continuing and developing it by engaging ourselves in trans- and inter-disciplinary research groups. The topic is complex and we consider that for Romania this is not only necessary but also opportune.

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